

- 8 -

CLAIMS

1. A method of improving the security of computer communications over a connecting network comprising the steps carried out before a data packet enters the connecting network from a user domain of:
- 5
- a) tagging the data packet from a user domain with a security level marking, and
- b) appending the tagged data packet with a string formed from a check-sum made over the data packet and security level marking tag to form a datagram.
- 10
2. A method as claimed in Claim 1, comprising the further steps, carried out as the datagram attempts to enter a second user domain, of:
- c) verifying the string in the received datagram matches a string calculated over the received data packet and security level marking tag, and
- 15
- d) verifying the received security level marking tag matches the security level of the second user domain.
3. A method as claimed in Claim 1 or Claim 2, comprising the further step of encrypting each datagram before entry into the wide area network.
- 20
4. A method as claimed in Claim 3, wherein datagrams from more than one user domain are encrypted by the same cryptograph.
5. A method as claimed in any preceding claim, wherein the check-sum is a one-way hash function.
- 25
6. A method as claimed in Claim 5, wherein the one-way hash function is SHA-1.

- 9 -

7. A method as claimed in any preceding claim, further comprising the step of recording any mismatch of check-sum or security level marking tag.
8. A domain separator for improving the security of computer communications over a connecting network arranged to carry out the method according to any preceding claim.
9. A domain separator as claimed in Claim 8, wherein the user domain security level marking is set by a physical switch on the device.